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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,410	02/27/2004	Jong-jin Yi	Q78932	4531

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EXAMINER	
ABDULSELAM, ABBAS I	

ART UNIT	PAPER NUMBER
2629	

DATE MAILED: 11/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/787,410	YI, JONG-JIN	
	Examiner	Art Unit	
	Abbas I. Abdulselam	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5,8-10 and 12-15* is/are rejected.

7)☒ Claim(s) *3,4,6,7,11 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 10/19/05; 1/21/05, 2/27/04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2, 5, 8-10 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kavanagh (USPN 6809726) in view of Cok (USPN 7106307).

Kavanagh teaches a touch screen system, comprising, (touchscreen display, col. 3, lines 13-18 and Fig. 3 (10)) a display unit for displaying at least one of a plurality of interfaces; (coordinate boundary (18) such as circle and other shapes, col. 4, lines 12-14 and Fig. 3(18)) a touch panel for outputting a signal in correspondence with a touch input on the display unit; (display (10) with a calibration point (24) col. 4, lines 20-24 and Fig. 3 (10, 24), displaying at least one calibration target and sensing a calibration touch for at least one calibration target, col. 2, lines 49-50 and col. 2, line 52. Note the term "calibration" refers to mapping that provides correct alignment of touch panel coordinates to display coordinates, col. 1, lines 51-52) a coordinate value storage unit for storing coordinate value information indicating an active region of an active interface of the plurality of the interfaces; (control logic processor (32) includes storage device, memory (48) which functions as a data base in which coordinates entered for each valid calibration operation are stored, col. 4, lines 39-43 and fig. 4 (32, 48); note that valid operation is meant within an acceptable boundary (18), col. 4, lines 61-64) a decision unit for

deciding whether the first coordinate values exist in the active region indicated by the coordinate value information stored in the coordinate value storage unit, in a decision; (a control logic processor (32) determines whether the coordinates for each touch point (20) are within an acceptable coordinate boundary (18), col. 4, lines 61-64. As discussed above, the control logic processor (32) also has a memory (48) in which coordinates entered for each valid calibration operation are stored) and a control unit for interrupting a response to the touch input if the first coordinate values exist outside the active region according to the decision of the decision unit (if the coordinates for an actual touch points (20) are not valid, control logic processor (32) executes recomputation step (42), or rejects compute coordinates (42) as indicated Fig. 5 (42), col. 5, lines 9-11).

While kavanagh teaches a control logic processor (32) obtaining the coordinates of the actual touch point (20) for each calibration target displayed (col. 4, lines 56-58, Fig. 3 (20) and Fig. 4 (32)), kavanagh does not teach calculating first coordinate values of the touch input based on the signal outputted from the touch panel.

Cok on the other hand teaches an external controller 18 coordinating the application of various signals to the touch screen 10, and performing calculations based on responses of the touch sensitive elements to touches, in order to extract the (X, Y) coordinates of the touch (col. 1, lines 39-44 and Fig. 1 (18)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kavanagh's touch screen control system shown in Fig. 4 to adapt Cok's external controller 18 as configured in Fig. 1 because the use of an external controller (18)

helps compute a location of the touch in a touch screen (10) as taught by Cok (col. 1, lines 35-37).

Regarding claim 2, Kavanagh teaches the coordinate value information stored in the coordinate value storage unit is updated according to a first interface to be activated (if the touch point 20 coordinates are verified to be within an acceptable coordinate boundary (18), control logic processor 32 stores the verified coordinates in a data base 48 (co. 5, lies 3-5); note there is only one acceptable coordinate boundary (18) as shown in Fig. 3).

Regarding claim 5, Kavanagh teaches a control method for a touch screen system having a display unit for displaying at least one of a plurality of interfaces and a touch panel for outputting a signal corresponding to a touch input on the display unit, (touchscreen display, Fig. 3 (10), coordinate boundary (18) such as circle and other shapes, col. 4, lines 12-14 and Fig. 3(18), display (10) with a calibration point (24) col. 4, lines 20-24 and Fig. 3 (10, 24), displaying at least one calibration target and sensing a calibration touch for at least one calibration target, col. 2, lines 49-50 and col. 2, line 52.) comprising steps of: deciding whether the first coordinate values exist in an active region of an active interface of the plurality of the interfaces; (a control logic processor (32) determines whether the coordinates for each touch point (20) are within an acceptable coordinate boundary (18), col. 4, lines 61-64) and interrupting a response to the touch input if the first coordinate values exist outside the active regions as a result of the decision (if the coordinates for an actual touch points (20) are not valid, control logic processor (32) executes

recomputation step (42), or rejects computed coordinates (42) as indicated Fig. 5 (42), col. 5, lines 9-11).

While kavanagh teaches a control logic processor (32) obtaining the coordinates of the actual touch point (20) for each calibration target displayed (col. 4, lines 56-58, Fig. 3 (20) and Fig. 4 (32)), kavanagh does not teach calculating first coordinate values of the touch input based on the signal outputted from the touch panel.

Cok on the other hand teaches an external controller 18 coordinating the application of various signals to the touch screen 10, and performing calculations based on responses of the touch sensitive elements to touches, in order to extract the (X, Y) coordinates of the touch (col. 1, lines 39-44 and Fig. 1 (18)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kavanagh's touch screen control system shown in Fig. 4 to adapt Cok's external controller 18 as configured in Fig. 1 because the use of an external controller (18) helps compute a location of the touch in a touch screen (10) as taught by Cok (col. 1, lines 35-37).

Regarding claim 8, kavanagh teaches one interface of the plurality of interfaces is one of a box, a window, an icon, and a bar (coordinate boundary 18 shown as a circle in Fig. 3 may take shapes such as a square, rectangle ellipse etc., col. 4, lies 12-14).

Regarding claim 9, Kavanagh teaches the signal is a predetermined sensing signal (the calibration target corresponding to a previously determined calibration reference point; and sensing a calibration touch for at least one calibration target, col. 2, lines 50-52).

Regarding claim 10, kavanagh's teaches the first coordinate values indicate a position of the touch input (control logic processor 32 obtains the coordinates of the actual touch point 20 for each calibration target displayed, col. 4, lines 56-58).

Regarding claim 12, Kavanagh teaches the one interface of the plurality of interfaces is one of a box, a window, an icon, and a bar (coordinate boundary 18 shown as a circle in Fig. 3 may take shapes such as a square, rectangle ellipse etc., col. 4, lies 12-14).

Regarding claim 13, Kavanagh teaches the signal is a predetermined sensing signal (the calibration target corresponding to a previously determined calibration reference point; and sensing a calibration touch for at least one calibration target, col. 2, lines 50-52).

Regarding claim 14, Kavanagh teaches the first coordinate values indicate a position of the touch input (control logic processor 32 obtains the coordinates of the actual touch point 20 for each calibration target displayed, col. 4, lines 56-58).

Regarding claim 15, Kavanagh teaches interrupting the response comprises ignoring the touch input (Fig. 5 (42), rejecting compute coordinates, col. 5, lines 32-36).

Allowable Subject Matter

3. Claims 3-4, 6-7, 11 and 16 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Kavanagh teaches as illustrated in Fig. 5 touchscreen display 10 in which in a prerequisite centering step (step 34), the operator is instructed to verify that underlying display 46 is centered, wherein after having verified that the underlying display 46 is centered, a control logic processor 32 executes touch step 36 wherein an operator is prompted to touch one or more calibration targets 14, such as are shown in FIGS. 1A and 1B, such that the control logic processor 32 obtains the coordinates of the actual touch point 20 for each calibration target displayed, checks to determine whether the coordinates of each actual touch point 20 obtained in step 38 are valid, (within an acceptable coordinate boundary (18)), and executes recomputation step 42 if the coordinates for an actual touch point 20 are not valid (col. 4, lines 46-67 and col. 5, lines 1-15).

Regarding claims 3, prior art does not teach a touch screen system including a coordinate value information indicating an active region and a decision unit for deciding whether coordinate values exist in the active region such that the system further includes a mode selection unit for setting an active area, wherein the mode selection unit sets an operation mode of the touch panel to one of a first mode for setting an entire area of the display unit as the active area, a second

mode for setting the entire area of the display unit to an inactive area, and a third mode for setting a certain region of the display unit to the active area.

Regarding claim 4, prior art does not teach a touch screen system including a touch panel and a coordinate value information indicating an active region and a decision unit for deciding whether coordinate values exist in the active region such that the system further includes a mode selection unit for setting an active area, wherein the mode selection unit sets an operation mode of the touch panel to one of a first mode for setting an entire area of the display unit as the active area, a second mode for setting the entire area of the display unit to an inactive area, and a third mode for setting a certain region of the display unit to the active area, the system also including a mode release key for releasing the second mode and the third mode, wherein, if the operation mode of the touch panel is set to one of the second and third modes and a signal for the mode release key is received, the control unit switches the operation mode of the touch panel to the first mode.

Regarding claim 6, prior art does not teach a control method for screen system including a touch panel, calculating a first coordinate corresponding to a touch input and deciding whether the coordinates values exist in an active region with a step of setting an operation mode of the touch panel to one of a first mode for setting an entire area of the display unit as an active area, a second mode for setting the entire area of the display unit as an inactive area, and a third mode for setting a certain region of the display unit as the active area.

Regarding claim 7, prior art does not teach a control method for screen system including a touch panel, calculating a first coordinate corresponding to a touch input and deciding whether the coordinates values exist in an active region with a step of setting an operation mode of the touch panel to one of a first mode for setting an entire area of the display unit as an active area, a second mode for setting the entire area of the display unit as an inactive area, and a third mode for setting a certain region of the display unit as the active area the system further including receiving a mode release signal for releasing the second mode and the third mode and operating the touch panel in the first mode if the operation mode is set to one of the second and third modes and the mode release signal is received.

Regarding claim 11, prior art does not teach a touch screen system including a coordinate value information indicating an active region and a decision unit for deciding whether coordinate values exist in the active region such that the system further includes a mode selection unit for setting an active area, wherein the mode selection unit sets an operation mode of the touch panel to one of a first mode for setting an entire area of the display unit as the active area, a second mode for setting the entire area of the display unit to an inactive area, and a third mode for setting a certain region of the display unit to the active area, wherein the third mode is for setting only the certain region of the display unit to the active area, wherein the certain region is less than the entire area of the display.

Regarding claim 16, prior art does not teach a control method for screen system including a touch panel, calculating a first coordinate corresponding to a touch input and deciding whether

the coordinates values exist in an active region with a step of setting an operation mode of the touch panel to one of a first mode for setting an entire area of the display unit as an active area, a second mode for setting the entire area of the display unit as an inactive area, and a third mode for setting a certain region of the display unit as the active area, wherein the third mode is for setting only the certain region of the display unit to the active area, wherein the certain region is less than the entire area of the display

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following arts are cited for further reference.

U.S. Pat. No. 6,262,717 to Donohue et al. teaches a "touch" capacity of the programmable zones 29, which may alternatively be programmed to respond only to "touches" which are of a sufficiently long duration (col. 6, lines 59-67).

U.S. Pat. No. 5,996,080 to Silva et al. teaches an attempt to distinguish unintentional touch panel depressions from intentional depressions. (FIG. 10 is a flow diagram illustrating the operation of the terminal of FIG. 8)

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I. Abdulselam whose telephone number is 571-272-7685. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

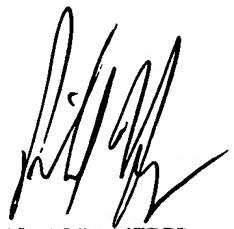
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abbas abdulselam

Examiner

Art Unit 2629

11/01/06



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